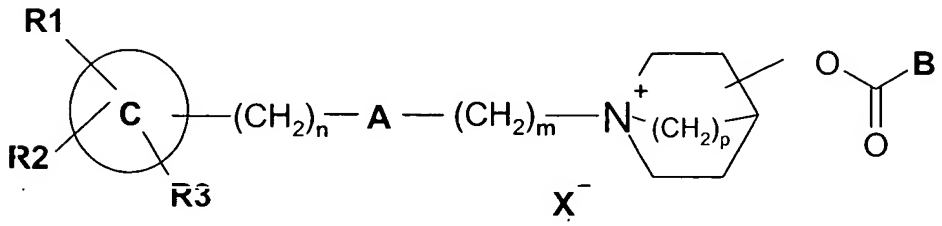
ABSTRACT

NOVEL QUINUCLIDINE DERIVATIVES AND MEDICINAL COMPOSITIONS CONTAINING THE SAME

A compound according to formula (I)

(I)



wherein:

© is a phenyl ring, a C_4 to C_9 heteroaromatic compound containing one or more heteroatoms, or a naphthalenyl, 5,6,7,8-tetrahydronaphthalenyl or biphenyl group;

R^1, R^2 and R^3 each independently represent a hydrogen or halogen atom, or a hydroxy group, or a phenyl, $-OR^4$, $-SR^4$, $-NR^4R^5$, $-NHCOR^4$, $-CONR^4R^5$, $-CN$, $-NO_2$, $-COOR^4$ or $-CF_3$ group,or a straight or branched lower alkyl group which may optionally be substituted, for example, with a hydroxy or alcoxy group, wherein R^4 and R^5 each independently represent a hydrogen atom, straight or branched lower alkyl group, or together form an alicyclic ring; or R^1 and R^2 together form an aromatic, alicyclic or heterocyclic ring;

n is an integer from 0 to 4;

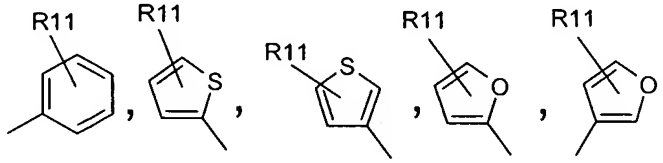
A represents a $-CH_2-$, $-CH=CR^6$, $-CR^6=CH-$, $-CR^6R^7-$, $-CO-$, $-O-$, $-S-$, $-S(O)-$, SO_2 or $-NR^6-$ group, wherein R^6 and R^7 each independently represent a hydrogen atom, straight or branched lower alkyl group, or R^6 and R^7 together form an alicyclic ring;

m is an integer from 0 to 8; provided that when m = 0, A is not $-CH_2-$;

p is an integer from 1 to 2 and the substitution in the azoniabicyclic ring may be in the 2,3 or 4 position including all possible configurations of the asymmetric carbons;

B represents a group of formula i) or ii):

wherein R^{10} represents a hydrogen atom, a hydroxy or methyl group; and R^8 and R^9 each independently represents



wherein R^{11} represents a hydrogen or halogen atom, or a straight or branched lower alkyl group and Q represents a single bond, -CH_2-, -CH_2-CH_2-, -O-, -O-CH_2-, -S-, -S-CH_2- or -CH=CH-, and when i) or ii) contain a chiral centre they may represent either configuration;

X represents a pharmaceutically acceptable anion of a mono or polyvalent acid,

which shows high affinity for muscarinic M_3 receptors (Hm3).